REMARKS

Claims 3-4, 13-14, 23-25, and 29-53 are pending in the Application, of which Claims 3, 13, 32, 37, 44, and 49 are independent claims. The Applicants note with appreciation that the Examiner has allowed Claims 32-53. Claims 3-4 and 23-24 stand rejected under 35 U.S.C. § 102 as being deemed anticipated by U.S. Patent No. 3,522,816 to Springer and Claims 13-14, 25, and 29-31 stand rejected under 35 U.S.C. § 103 as being deemed obvious over Springer. In response, Claims 3 and 13 have been amended to clarify the Applicants' invention.

As shown in FIG. 4 of the Application, the timing gas chamber (56) is in gas communication with the delivery valve member (26). In other words, whatever gas pressure is in the timing gas chamber (56) is also communicated to the delivery valve assembly (55). Consequently, Claims 3 and 13 now recite a timing gas chamber in gas communication with a delivery valve assembly and that movement of the delivery valve member is responsive to gas pressure within the timing gas chamber.

Springer discusses a fluid system that employs a fluidic switch to control gas flow. For example, Figure 1 of Springer shows a normally closed valve (20) for delivering gas to a patient from a gas source (10). The valve (20) is actuated under the control of a monostable fluidic switch (32). That device has an input duct (28), a stable output duct (40), an unstable output duct (42), a control duct (44), and an atmospheric duct (64). The fluidic device operated similarly to an OR-NOR gate.

In particular, gas from the source (10) is provided to the input duct (28), where it is normally directed to a tank (26). Once a predetermined pressure is attained in the tank (26), gas flows from the tank (26) to the control duct (44). That flow of gas into the control duct (44) cause the switch (32) to switch from the source gas flow from the stable output duct (40) to the unstable output duct (42), thereby directing gas to the chamber (52) of the normally closed valve (20) so as to urge against a spring-biased valve element (54) to open the valve. Once the valve (20) is opened, gas from the source is delivered to the patient.

Because gas flow has been switched to the unstable output duct (42), pressure in the tank (26) begins to drop. Eventually, the pressure at the control duct (44) drops sufficiently so that the atmospheric pressure at the atmospheric duct (64) cause the switch (32) to switch gas flow

from the unstable output duct (42) to the stable output duct (40), thereby halting gas flow to the valve (20) and returning gas flow to the tank (26).

Once gas flow to the valve (20) ends, the remaining gas in the valve chamber (52) vents to atmosphere through a bleed port (53). As the gas vents, the spring (56) urges the valve element (54) closed to interrupt the flow of gas to the patient.

As now claimed in Claim 3, the Applicants' invention is a gas regulator that comprises "a delivery valve assembly comprising a delivery outlet and a delivery valve member moveable within the delivery valve assembly" ... "a timing gas chamber in gas communication with the delivery valve member for receiving gas, movement of the delivery valve member responsive to gas pressure within the timing gas chamber" and "an adjustment system for controlling the amount of time required for the gas to sufficiently fill the timing gas chamber...."

In contrast, the Springer valve chamber (52) is in gas communication with the valve element (54). However, the valve chamber (52) is not associated with "an adjustment system...." The tank (26) is associated with "an adjustment system...," but the tank (26) is not in gas communication with the valve element (54). Instead, the tank (26) communicates with the fluidic switch (32) for controlling gas flow through the switch. Furthermore, movement of the valve element (54) is responsive to gas flow from the fluidic switch (32), not the gas pressure within the tank (26). Thus, Springer does not disclose or suggest the claimed invention.

Furthermore, there is no motivation to modify Springer to place the tank (26) in gas communication with the valve element (54) such that movement of the valve element would be responsive to pressure in the tank. On the contrary, the use of a fluidic switch (32) is an important aspect of Springer and removing the switch would be contrary to the teachings of Springer. As such, the amended claims are not rendered obvious by Springer.

Claims 4 and 23-25 depend from independent Claim 3 and Claims 14 and 29-31 depend from independent Claim 13. Those dependent claims incorporate the limitations from the amended independent claims and include further patentable limitations. Allowability of the dependent claims thus follows from the allowability of their independent claims.

Reconsideration of the rejections of Claims 2-3, 13-14, 23-25, and 29-31 is respectfully requested.

CONCLUSION

In view of the above amendments and remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,

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